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Date: April 25, 2005

*Jeffrey N. Wong*  
Jeffrey N. Wong  
Registration No. 46,414

Enclosures

Response to Office Action - 5 pages

Petition for Extension of Time Under 37 CFR 1.136(a) - 1 page

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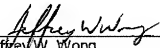
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Date: April 25, 2005

  
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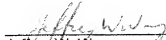
Response to Office Action - 8 pages

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Date: April 25, 2005

  
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Jeffrey W. Wong  
Registration No. 46,414

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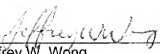
Response to Office Action - 8 pages

Petition for Extension of Time Under 37 CFR 1.136(a) - 1 page

**CERTIFICATION OF FACSIMILE TRANSMISSION**

I hereby certify that this paper, consisting of 8 pages total, is being facsimile transmitted to the Patent and Trademark Office (703-872-9306) on the date shown below:

Date: April 25, 2005

  
Jeffrey W. Wong  
Registration No. 46,414

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Inventor(s): VASUDEVA, Kailash C.  
Application no.: 10/656,948  
Filed: September 8, 2003  
Title: EXHAUST SYSTEM FLANGES  
Group Art Unit: 3677  
Examiner: RODRIGUEZ, Ruth C.  
Attorney docket no. PAT 51403A-2

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA  
22313-1450

April 25, 2005

**ELECTION AND RESPONSE**

This is in response to the Office Action dated February 25, 2005, requiring restriction under 35 U.S.C. 121. A one-month extension of time is being allowed with this election and response.

**Amendments to the Claims** are reflected in the listing of claims which begins on page 2 of this paper.

**Remarks/Arguments** begin on page 8 of this paper.

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims**

**CLAIMS**

- 1.(Original) An automotive exhaust flange assembly for attaching exhaust pipes, said assembly comprising:
  - a first flange, made of powder metallurgically produced material, comprising a mating surface and a pipe attachment surface opposite said mating surface; and
  - a second flange, made of powder metallurgically produced material, comprising a sealing surface complementary to said mating surface of said first flange and a pipe attachment surface opposite said sealing surface;
  - wherein said first flange or said second flange further comprises gasket retention means through mechanical interference to provide squeeze areas.
- 2.(Original) The flange assembly of claim 1 wherein the gasket retention means is an oval annular recess.
- 3.(Original) The flange assembly of claim 1 wherein the gasket retention means is a notched annular recess.
- 4.(Withdrawn) The flange assembly of claim 1 wherein said first flange further comprises a set of ribs within said pipe attachment surface for reducing the weight of said first flange.
- 5.(Withdrawn) The flange assembly of claim 1 wherein said second flange further comprises a set of ribs within said pipe attachment surface for reducing the weight of said second flange.
- 6.(Withdrawn) An automotive exhaust flange assembly for attaching exhaust pipes, said assembly comprising:

a first flange, made of powder metallurgically produced material, comprising a mating surface and a pipe attachment surface opposite said mating surface; and

a second flange, made of powder metallurgically produced material, comprising a sealing surface complementary to said mating surface of said first flange and a pipe attachment surface opposite said sealing surface;

wherein one of said first or second flange further comprises at least one concave recess for accepting fastening means to secure said first and second flanges when mated.

7.(Withdrawn) The flange assembly of claim 6 wherein said at least one concave recess comprises a hexagonal portion at one end.

8.(Withdrawn) The flange assembly of claim 6 wherein said fastening means comprises a hexagonal shoulder.

9.(Withdrawn) An automotive exhaust flange assembly for attaching exhaust pipes, said assembly comprising:

a first flange, made of powder metallurgically produced material, comprising a first surface having a cavity and a pipe attachment surface opposite said first surface; and

a second flange, made of powder metallurgically produced material, comprising a sealing surface complementary to said cavity and a pipe attachment surface opposite said sealing surface;

said second flange further comprises at least one integral stud for securing said second flange to said first flange when said flanges are mated.

10.(Withdrawn)An automotive exhaust flange assembly for attaching exhaust pipes, said assembly comprising:

a first flange, made of powder metallurgically produced material, comprising a mating surface and a pipe attachment surface opposite said mating surface; and

a second flange, made of powder metallurgically produced material, comprising a sealing surface complementary to said mating surface of said first flange and a pipe attachment surface opposite said sealing surface;

said first flange further comprising a hat-shaped annular recess for receiving a hat-shaped gasket.

11.(Withdrawn) The flange assembly of Claim 10 wherein said second flange further comprises a protrusion corresponding to said hat-shaped annular recess of said first flange.

12.(Withdrawn) An automotive exhaust flange assembly for attaching exhaust pipes, said assembly comprising:

a first flange, made of powder metallurgically produced material, comprising a mating surface and a pipe attachment surface opposite said mating surface; and

a second flange, made of powder metallurgically produced material, comprising a sealing surface complementary to said mating surface of said first flange and a pipe attachment surface opposite said sealing surface;

said first flange comprising an v-shaped annular rib;

said second flange further comprising a v-shaped annular recess for receiving said annular rib.

13.(Withdrawn) The flange assembly of claim 12 wherein said first flange further comprises a pipe attachment means arranged on said pipe attachment surface of said first flange.

14.(Withdrawn) The flange assembly of claim 12 wherein said second flange further comprises a pipe attachment means arranged on said pipe attachment surface of said second flange.

15.(Withdrawn) An angled exhaust flange assembly comprising:

an exhaust pipe having a first and a second end;

a flange securable to an end of the pipe;

the first end of the pipe being angled a pre-determined amount away from the second end of the pipe so that an angled flange assembly is provided when the flange is fastened to the first end.

16.(Withdrawn)        The angled exhaust flange assembly as recited in claim 15, wherein the pre-determined amount is substantially 135 degrees.

17.(Withdrawn)        The angled exhaust flange assembly as recited in claim 15, wherein a second flange is fastened to the second end of the pipe.

18.(Withdrawn)        The angled exhaust flange assembly as recited in claim 15, wherein the flange is a spherical flange.

19.(Withdrawn)        The exhaust flange assembly as recited in claim 17, wherein the second flange is a spherical flange.

20.(Withdrawn)        An angled exhaust flange assembly comprising:  
                         an exhaust pipe having a first and a second end;  
                         a flange;  
                         an angled portion, having a first end connected to the flange and a second end connected to the first end of the exhaust pipe for providing an angled exhaust flange assembly.

21.(Withdrawn)        An exhaust flange assembly for sealingly connecting exhaust pipes to each other, said assembly comprising:  
                         a female flange having a mating surface and a pipe attachment surface; and  
                         a male flange having a mating surface and a pipe attachment surface;  
                         where spacers are arranged on said pipe attachment surface of either said female flange or said male flange to provide a pre-determined minimum clearance between said pipe attachment surface and fastening means;  
                         said spacers being integrally formed when the flange is manufactured via a powder metallurgy process.

22.(Withdrawn)        The exhaust flange assembly as recited in claim 21, wherein the spacers are separately formed and bonded to the flange during a sintering operation



23.(Original) A method of manufacturing an exhaust flange comprising the steps of:  
manufacturing a back plate via a stamping process;  
manufacturing a sealing part via a powder metallurgy process;  
pre-sintering the sealing part;  
sintering the back plate and the sealing part; and  
assembling the back plate and the sealing part to form the exhaust flange.

24.(Original) A method of manufacturing an exhaust flange comprising the steps of:  
manufacturing a back plate via a stamping process;  
manufacturing a sealing part via a powder metallurgy process;  
sintering the sealing part;  
assembling the back plate and the sealing part; and  
welding the back plate to the sealing part to form the exhaust flange.

25.(Original) A method of manufacturing an exhaust flange comprising the steps of:  
manufacturing a back plate via a powder metallurgy process;  
manufacturing a sealing part via a powder metallurgy process;  
separately pre-sintering the backing plate and the sealing part;  
assembling the back plate and the sealing part; and  
sintering the back plate and the sealing part to form the exhaust flange.

26.(Original) A method of manufacturing an exhaust flange comprising the steps of:  
manufacturing a back plate via a powder metallurgy process;  
manufacturing a sealing part via a powder metallurgy process; and  
sintering the back plate and the sealing part to form the exhaust flange.

27. (Original) An automotive exhaust flange assembly for attaching exhaust pipes, said assembly comprising:  
a curved flange, made of powder metallurgically produced material; and  
a straight flange, made of powder metallurgically produced material,

wherein when said curved and straight flanges are mated and secured by fastening means, said curved flange deflects towards to for a flat sealing surface between said curved and straight flanges.

28.(Withdrawn) A flange for use in a flange assembly comprising:

a sealing surface for mating with a sealing surface of a second flange and a pipe attachment surface;

said sealing surface comprising at least one raised area for reducing deflection of said flange when said flange is mated; and

a set of mounting holes for receiving fastening means securing mating of flange to said second flange.

29.(Withdrawn) A flange for use in a flange assembly comprising:

a sealing part comprising a cavity for receiving a complementary surface of a second flange; and

a back plate having a recess, in a first surface, for receiving and housing said sealing part and a second surface providing a pipe attachment surface.

30.(Withdrawn) The flange assembly of Claim 1 wherein said first flange comprises 0.75 to 1 weight percent of hexagonal boron nitrate.

31.(Withdrawn) The flange assembly of Claim 1 wherein said second flange comprises 0.75 to 1 weight of hexagonal boron nitrate.

**ELECTION and REMARKS**

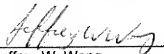
In response to the Office Action of February 25, 2005, Applicant provisionally elects to restrict the application to Invention 1, Species 2, sub-species 1 with traverse and without prejudice to the right to later file at least one divisional application based on the non-elected subject-matter, if a generic claim is not finally held to be allowable.

However, Applicant partially traverses the restriction requirement, in particular submitting that inventions II to V should be should be examined together with the elected species. Inventions II to V all relate to methods of manufacturing the exhaust flanges as elected above.

We look forward to further communication on this application.

Respectfully submitted,

By:



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Registration No. 46,414  
Attorney for Applicant

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IP-KIT-120737.1

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Inventor(s): **VASUDEVA, Kailash C.**  
Application no.: **10/656,948**  
Filed: **September 8, 2003**  
Title: **EXHAUST SYSTEM FLANGES**  
Group Art Unit: **3728**  
Examiner: **RODRIGUEZ, Ruth C.**  
Attorney docket no. **PAT 51403A-2**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450  
U.S.A.

Date:  
April 25, 2005

**PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)**

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above identified application.

The requested extension and appropriate non-small entity fee are as follows:

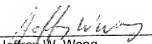
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<input type="checkbox"/>	Three months 37 CFR 1.17(a)(1)	\$1020

☒ Applicant claims small entity status. Therefore, the fee amount shown above is reduced by one-half, and the resulting fee is **\$60**

The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number **501593**. I have enclosed a duplicate copy of this sheet.

Respectfully submitted,

By:

  
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